

## STEEL MEMBER EXCELLENT IN WEAR RESISTANCE AND ITS PRODUCTION

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**- European:**

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### Abstract of JP4254574

**PURPOSE:** To develop a steel member excellent in wear resistance by highly carburizing a Cr-contg. steel member, internally oxidizing the Cr in the outermost surface, then carburizing and hardening or carbonitriding and hardening the member and further sulfurizing the member. **CONSTITUTION:** The base material of a low-alloy steel contg., by weight, 0.5-2.5% Cr and 0.1-0.3% C is highly carburized to internally oxidize the Cr in the outermost surface of the steel member, then carburized and hardened in a low-carbon- potential atmosphere or carbonitrided and hardened to form a metal carbide unprecipitated layer having 2-10µm thickness due to the formation of the solid soln. of the metal carbide, and a metal carbide precipitated layer is formed in the layer directly thereunder. The member is then sulfurized at low temp. to form a sulfurized layer having 2-10µm thickness within the depth of the metal carbide unprecipitated layer. A steel material excellent in initial fitness and wear resistance is obtained in this way.

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